

CLAIMS

1. A gas-generating composition comprising:

(a) ammonium nitrate;

5 (b) metal oxyacid salt which produces a basic substance in combustion;

(c) ammonium perchlorate; and

10 (d) at least one kind of combusting component selected from the group consisting of polymer binder, energetic material, and microcrystalline carbon powder, wherein the ammonium nitrate constitutes between 50 and 97 weight % of the sum of the ammonium nitrate, the metal oxyacid salt, and the ammonium perchlorate.

15 2. A gas-generating composition according to Claim 1, wherein the metal oxyacid salt comprises at least one compound selected from the group consisting of alkali metal nitrate, alkali metal nitrite, alkali earth metal nitrate, and alkali earth metal nitrite.

20 3. A gas-generating composition according to Claim 2, wherein the metal oxyacid salt is alkali metal nitrate, and the molar ratio of the ammonium perchlorate with respect to the alkali metal nitrate is between 0.8 and 1.2.

25 4. A gas-generating composition according to Claim 2, wherein the metal oxyacid salt is alkali metal nitrite, and the molar ratio of the ammonium perchlorate with respect to the alkali metal nitrite is between 0.8 and 1.2.

30 5. A gas-generating composition according to Claim 2, wherein the metal oxyacid salt is alkali earth metal nitrate, and the molar ratio of the ammonium perchlorate with respect to the alkali earth metal nitrate is between

1.6 and 2.4.

6. A gas-generating composition according to Claim 2,
wherein the metal oxyacid salt is alkali earth metal
5 nitrite, and the molar ratio of the ammonium perchlorate
with respect to the alkali earth metal nitrite is between
1.6 and 2.4.

7. A gas-generating composition according to Claim 1,
10 wherein the combusting component constitutes between 2 and
60 weight % of the sum of the ammonium nitrate, the metal
oxyacid salt, the ammonium perchlorate, and the combusting
component.

15 8. A gas-generating composition according to Claim 1,
wherein the metal oxyacid salt is potassium nitrate, and
said ammonium nitrate is phase-stabilized ammonium nitrate,
which is phase-stabilized by using said potassium nitrate.

20 9. A gas-generating composition according to Claim 1,
further comprising a stabilizer for suppressing natural
decomposition of the gas-generating composition.

10. A gas-generating composition according to Claim 1,
25 wherein the oxygen-balance value of the gas-generating
composition is between -0.1 and +0.1 (g/g).

11. A gas-generating composition for vehicle passenger
protecting device, comprising:

- 30 (a) phase-stabilized ammonium nitrate having an
average particle size between 1 and 1000 μm ;
(b) potassium nitrate having an average particle size
between 1 and 1000 μm ;
(c) ammonium perchlorate having an average particle

size between 1 and 1000 μm ; and

(d) microcrystalline carbon powder having an average particle size between 1 and 500 μm ,

wherein the phase-stabilized ammonium nitrate
5 constitutes between 50 and 97 weight % of the sum of the phase-stabilized ammonium nitrate, the potassium nitrate, and the ammonium perchlorate.